

NIOSH 2013 Pesticide Handler Personal Protective Technology Stakeholders Meeting



Michael Alavanja, DrPH

Elaine Cullen, PhD

Maryann D'Alessandro, PhD

Kim Faulkner, PhD, MPH

Xuemei Huang, MD, PhD

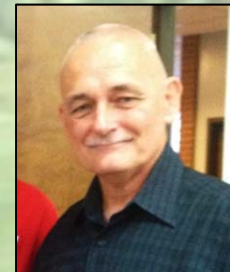
Ron Jester, MS, PE

Kevin Keaney

Chuck Urban

March 26, 2013

Washington D.C.



This meeting is being recorded

Using Video 'Stories' to Motivate Correct PPE Practices

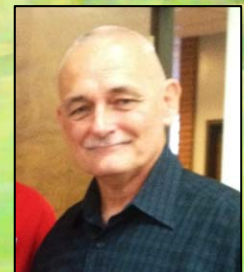


Marcy Harrington, MPA
George Hamilton, PhD
Kim Faulkner, PhD, MPH



Advisory Panel:

Michael Alavanja, DrPH
Elaine Cullen, PhD
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Ron Jester, MS, PE
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'Stories' Used to Motivate Safety in the Pacific Northwest



Marcy Harrington, MPA
Pacific Northwest Agricultural Safety and Health Center



PACIFIC NORTHWEST AGRICULTURAL SAFETY AND HEALTH (PNASH) CENTER
fishing • farming • forestry

Research for Healthy Workers, Strong Communities, and Productive Agriculture

STORYTELLING FOR SAFETY EDUCATION AND MOTIVATION

Marcy Harrington, MPA

Helen Murphy Robinson, RN, FNP

March 26, 2013

<http://depts.washington.edu/pnash> (800) 330-0827

University of Washington School of Public Health

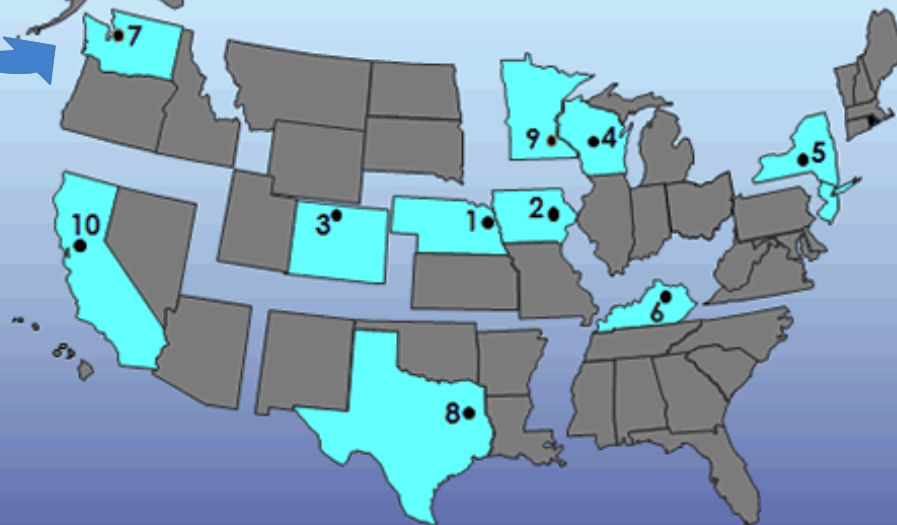
Who is PNASH?

PACIFIC NORTHWEST AGRICULTURAL SAFETY AND HEALTH CENTER

University of Washington School of Public Health
National Institute for Occupational Safety and Health

NIOSH Centers for Agricultural Disease and Injury Research, Education, and Prevention

December 2011



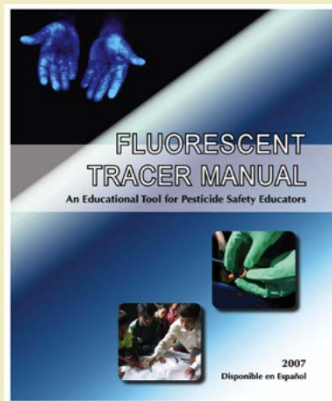
1. University of Nebraska Medical Center, Omaha
2. University of Iowa, Iowa City
3. Colorado State University, Ft. Collins
4. National Farm Medicine Center, Marshfield, WI
5. Bassett Healthcare, Cooperstown, NY

6. University of Kentucky, Lexington
7. University of Washington, Seattle
8. University of Texas Health Science Center, Tyler
9. University of Minnesota, Minneapolis
10. University of California, Davis

Small Anecdotes



This guide is 'pure gold'!
-NW Safety Professional



SOLUTION: Metal Mixing Table

This table is constructed out of metal with an expanded metal top and cannot absorb pesticides like wooden apple bins or tables. Handlers find it easier to use because it is taller and they don't need to bend over when measuring.

\$\$

Alert!

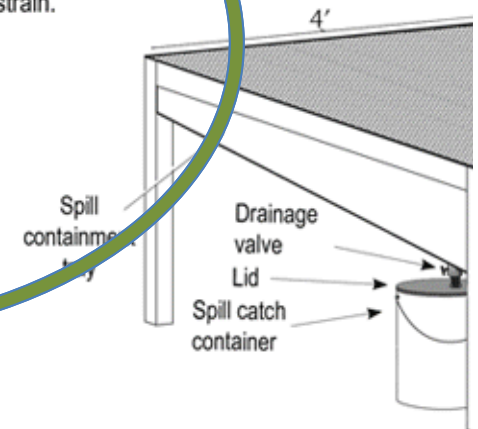
Install a spill containment tray under the table top to catch possible spills so concentrated pesticides do not soak into the ground. Slope the tray toward a drainage plug.

Idea A farm manager built this mixing table ...
... because he wanted a sturdy table that weathered well and did not absorb pesticides. He was also concerned that when his handlers used apple bins, they needed to bend over to look closely at marks on the measuring cups, resulting in an increased chance of face splashes and back strain.



"I like this table also for its height....
It can prevent back injuries during
pesticide handling."
~ Mr. Escareño

Evaluation finding
Nearly 75% of 155
handlers and managers
said they would
use it if it were



Life-Saving Stories

Recommended Users:

Radio Stations Serving Spanish
Speaking Listening Audiences

Health and Safety Trainers

Community Health Workers



Back- ground

Comparison of informal vs. formal narratives in farm safety education – both effective, informal preferred (Landa 2003).

Informal: Real people, events and time
 Personal relationships & feelings
 Generated participation, depth of thought &
 additional stories

Response

Collect and broadcast first-person stories of ladder injuries, heat-related illness and other community concerns

Partners

StoryCorps (National Public Radio)
Radio KDNA (Spanish Public Radio, 1st in U.S.)

Products

Short radio programs

Growers-Managers

English Language Methods



Tell Your Story


StoryCorps®
in partnership with



Pacific Northwest
Agricultural Safety and
Health Center
(PNASH)

University of Washington
Box 357234
Seattle, WA 98195-7234

- Have you had an accident or near miss on the farm that changed your life?
- Do you want to educate other farmers to prevent similar accidents?



What is it?
PNASH at the University of Washington is partnering with StoryCorps®, a national oral history project, to record the stories of your accidents in order to educate other farmers.

When is it?
The StoryCorps team will come to Washington state to gather recordings next **February 2009** at two central locations.

Who can participate?
Anyone who has had an **agriculture related** accident, injury, illness or near miss which resulted in a significant **life lesson** that others need to hear.

How does it work?
Once you register, we will contact you to review your story and provide details about the time and place of the recording session. Bring someone close to you to the recording sessions (a family member, friend, or co worker) to help you tell your story. The session will last 40 minutes after which you will receive a CD copy of your recording. With your permission it will be archived at the American Folklife Center at the Library of Congress and used by various agricultural organizations and radio stations to educate other farmers on health and safety.

What is the benefit?
Your story could save a life by preventing another accident like yours and will be preserved for generations to come.

TIME SLOTS ARE LIMITED - REGISTRATION IS REQUIRED

TO REGISTER please contact HELEN MURPHY
(800) 330-0827 or e-mail hmurf@u.washington.edu

Thanks to the generosity of the National Institute for Occupational Safety and Health NIOSH, there will be no charge for participation.

Washington Cattlemen's Association



WASHINGTON STATE CROP IMPROVEMENT ASSOCIATION



AG StoryCorps

Life Changing Agriculture Injuries from Farmers



“It hit home how important safety is and how much our parents loved us. Another little reality check on being careful around everything. Life is short.

- Chris Furrer describes to his father Scott rolling his tractor on their dairy farm in Washington state.

10 Other Stories – examples:

- Isabela breaks down in tears describing how she can never work again after falling from a ladder.
- Russell found his farmer brother 10 days after an ATV overturn and had his own rollover one year later

VISIT http://depts.washington.edu/pnash/ag_storycorps

Ladder Injury Stories

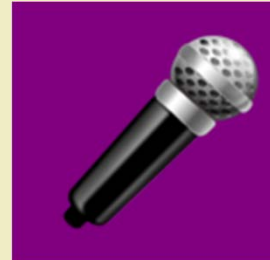
Spanish Language Methods



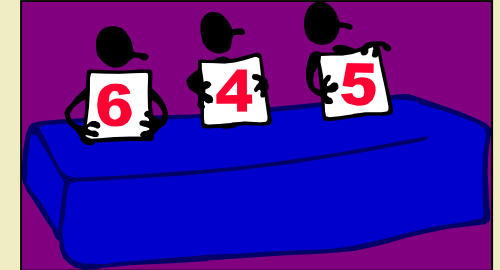
Radio Storytelling
Contest



Phone
Interviews



Record
Finalists



Select Winners



Call in Radio Talk Show



Field Test -CHW

Workers' Ladder Injury Stories

Real workers discuss their stories about falls from ladders, the injuries they suffered, and the consequences they and their families face. Mixed with talk show - Radio KDNA, WA

Story example (translated from Spanish):

My name is Gregory and I'm from the state of Durango. I only had two apples bins so far and there they didn't want you to leave any apples behind, so I set the ladder and I tried to get an apple and that's when I went head first. I was on the 8th step of a 10 ft ladder, which is how I broke my neck. It was a surprise for me when I was taken to the recovery room, a wheel chair was there with my name on it and I said, no I am not going to be in that wheel chair because I had been working with that company for 20 years picking apples and I had never had an accident.



VISIT http://depts.washington.edu/pnash/audio_libraryENG#ladder

Ladder Injury Radio Show – Listener Evaluation (n = 29)

Remembered at least 1 story	83%
Recounted the story	86%
Remembered the cause	79%
ID significant consequence	79%
Named a lesson learned	72%
ID means of prevention	79%
Named something will remember	76%
Have own ladder injury story	48%

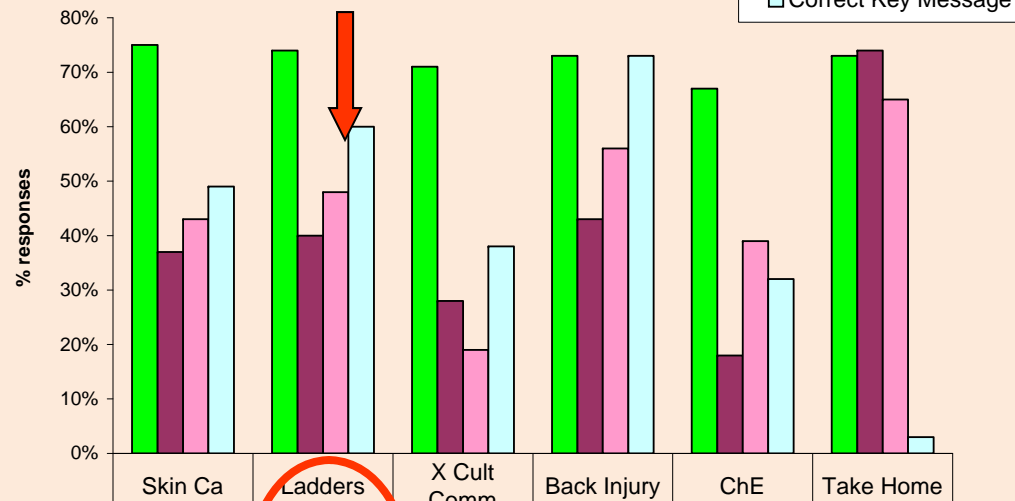
Comments.....

- One can learn a lot from others stories
- It can happen to anyone
- It is OK to fear ladder accidents
- Most people keep quiet about their accidents - the storytellers were brave

Results - Dissemination to Growers



GFG Reader Survey
n=190



Response rate	75%	74%	71%	73%	67%	73%
Read Article	37%	40%	28%	43%	18%	74%
Took Quiz	43%	48%	19%	56%	39%	65%
Correct Key Message	49%	60%	38%	73%	32%	3%

NewsWatch

1001 EXCHANGE: Money from 1001 exchanges, coupled with money such as this in Colorado's Jackson County, have combined to create the "perfect storm" for real estate prices throughout Colorado and Wyoming.

Workers tell of ladder injuries



NURSE MURPHY
by HELEN MURPHY

GREGARIO: "It was at the end of the day reaching for that last piece of fruit. Down I went, breaking my back. Now, I can no longer work. I lost my house, my savings, my dreams."

Imelda: "I knew that ladder was not safe. One step was wobbly. I asked my supervisor for another, but I was too impatient to wait for it. Overstretching to get that last piece of fruit, the ladder moved. Suddenly, I was on the ground with a broken leg. Out of work, two surgeries later with 14 screws and a metal plate, I am still in pain."

These are some of the stories workers are recounting for each other over a live talk-radio show in a new initiative to encourage workers to take ladder safety seriously.

Research on ladder injuries offers a better understanding of why falls occur. Reasons include overreaching from the upper two steps, improperly placing the ladder's third leg, slipping on icy steps or misting the last two steps.

Does lack of training, older age or inexperience play a role? Not necessarily. The younger, experienced ladder users take the most risks. While training is essential, workers tell us accidents are more an attitudinal and behavioral issue.

To tackle this subtle aspect of safety, the Pacific Northwest

Agricultural Safety and Health Center is taking a new approach to training through the use of traditional storytelling.

Why? Our Latino workforce comes from cultures that communicate information and lessons through stories. These range from fables to the more modern novelas, or soap operas.

Stories offer good lessons
Workers' stories about ladder injuries were gathered through a contest launched by the Spanish-language public-radio station KDNA in Granger, Wash. Four winners were selected by 10 judges.

What did we learn from their stories?
■ For workers: Slow down and pay attention. The economic loss from an accident is far more costly than forgoing wages from extra fruit. Set your ladder with care. Pay attention to holes in the ground. Check your ladder and report defects.

■ For managers: It is picking that hard-to-reach fruit that puts workers at risk. Tell them to leave it rather than lose their balance and livelihood. Don't send workers out with defective ladders.

■ For owners: Pay attention to what managers are doing. Are they pressuring workers to take chances? Are they doing the proper training? Are they inspecting their ladders?

Murphy, outreach and education director at the University of Washington Pacific Northwest Agricultural Safety and Health Center, may be reached by phone at 206.465.5906 or by e-mail at hnmurphy@u.washington.edu.

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POSTMASTER: Please send address corrections to Western Farmer-Stockman, 191 S. Gary Ave., Carol Stream, IL 60188.

Radio Novelas

Recommended Users:

**Radio Stations Serving Spanish
Speaking Listening Audiences**
Health and Safety Trainers
Community Health Workers



The Chavira Family - Listen as they cope with issues such as asthma, pesticide exposure, water quality, and workplace abuse common among immigrant farmworker families.



Heat Illnesses - Four short radio dramas help the listening audience understand what causes heat illnesses, how to recognize, treat, and prevent them.

VISIT http://depts.washington.edu/pnash/audio_library

Current Project – Video

Challenge

For on-farm safety education, growers and workers prefer video formats.



Aim

Reproduce both audio (Spanish) worker education programs into motivational videos:

- “Worker’s Ladder Injury Stories.” Radio Talk Show on Ladder Injuries.
- “Heat Illness.” Four Radio Novelas on Heat-Related Illness.

Approach

- ✓ Local, experienced, bi-cultural producer and staff
- ✓ Local actors, sites and footage of work
- ✓ Advisory group
- ✓ Shorter segments (20 min) for housing on YouTube
- ✓ Real ladder injuries depicted in realistic animation
- ✓ Use of subtitles (transparency of content)

Products

- ✓ YouTube
- ✓ CDs also contain state training videos and materials

Storytelling Method Tips

PNASH Lessons

- 1. Know your audience and tailor strategy for each**
- 2. Partner with trusted communication channel for that audience/community**
- 3. Coaching – message/story development, retakes**
- 4. Hispanic applicator's formality in image and language**
- 5. Sensitivity/permission from worker & employer to share workplace practices and incidents**
 - ✓ **Human Subject (IRB) Review – Informed Consent**
 - ✓ **Use of Image Consent/Release**
- 6. Outcomes/Impacts on worker safety**
 - ✓ **Intermediate measures –**
Sample population - knowledge gain, retention, motivators
 - ✓ **Impact measures (not conducted in this project)**
Testimonials – design-in feedback mechanisms
Needs: high incident rates, poor practices, biomonitoring, acute effects, few confounders, good surveillance, denominator

Storytelling Method Tips

Story Corp Strategies – ENG

- ✓ Storyteller speaks to friend or family member
- ✓ Stories archived in the National Library of Congress
- ✓ Short – 3 min
- ✓ New - Video animations to portray emotional/challenging stories

Radio KDNA Strategies - SPAN

- ✓ Radio call-in show: informational session and prizes
- ✓ Novelas/Radio Dramas
- ✓ Short - 5 min



Motivators

WA Pesticide Handler

Motivators to share story

Wanting others to benefit

Appreciated attribution

Motivators for safety

“be responsible”

“...if you are the support of the family, and if you do not ensure you are protected, you are going to be sick, and the consequence will be also be to the family.”



Safety is the “work of changing minds, and it’s not done overnight.”

~ ‘Practical Solutions’ project participant



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The Making and Impact of “An American Farm Tale”



George Hamilton, PhD
Rutgers Cooperative Extension

The background of the slide is a solid red color. A large, faint, circular watermark of the Rutgers University seal is visible, centered behind the text. The seal features a sunburst design with the word 'RUTGERS' at the top and 'UNIVERSITY' at the bottom.

RUTGERS

New Jersey Agricultural
Experiment Station

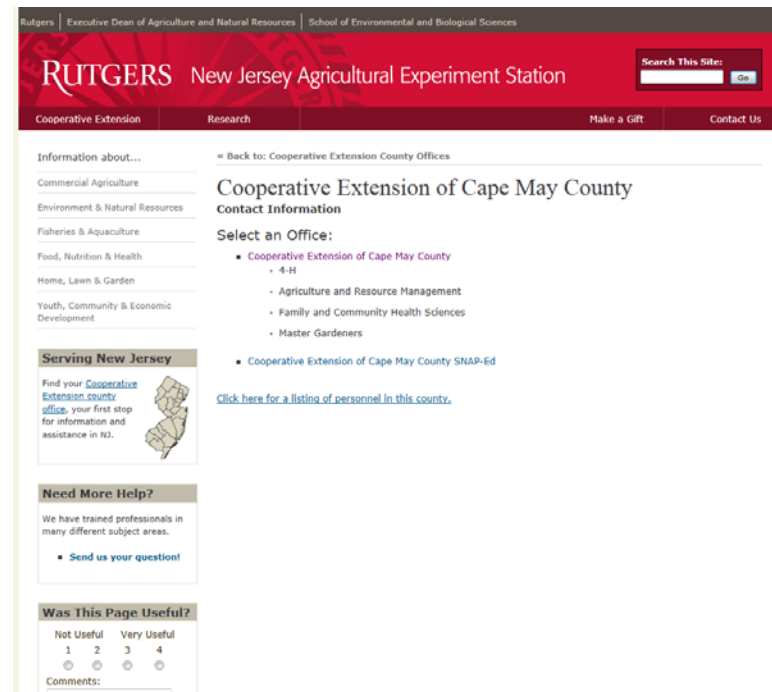
An American Farm Tale: Reflections 13 Years Later

George Hamilton

Specialist in Pest Management

How We Became Involved

- All it took was a phone call
- Met with the Rea family
- Solving the problem



The Video Came Later

- Talk by Mark Robson
- Stirred interest in getting the story out
- Asked to write grant
- Produced video and speakers guide



What Was Produced

- Video and speakers guide distributed to all PSEP programs in US
- Available in VHS, CD, and DVD formats
- Downloadable from Rutgers Farm Safety website
- <http://njaes.rutgers.edu/farmsafety/#Publications>
- Available in Spanish?

Issues and Challenges

- Getting the right story told without embarrassing the Rea's
- Production and distribution costs
- Today – Is the story still relevant?



Impacts

- Turn around in Mr. Rea's health
- Interest by others getting the Rea Story out to the public
- Video still used by state PSEP programs
- Use in more than just agricultural oriented training
- Telly Award in 2000

Acknowledgements

Participants

Mr. and Mrs. Rea

Larry Newbold

Mark Robson

Dr. Brachman

Rutgers Radio & Television

Support

Rutgers University

US Environmental Protection Agency

USDA



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NIOSH Pilot: Pesticide Handler Video “Stories”



Kim Faulkner, PhD, MPH
NIOSH Personal Protective Technology Laboratory

This meeting is being recorded

Pilot Overview



Farm Show: Day 1



Farm Show: Day 2-3



Formal Stories

- Real people, but not real time

Lessons Learned

- **Camera Shyness**
- **Storytelling Ability**
- **Level of Emotion and Impact Varies**

Next Steps...

- Shoot footage locally (and soon)
- Contract out post-production
- Leverage partnerships

Five-Minute Break

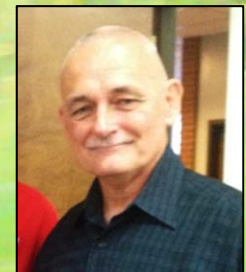


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Video “Stories” to Motivate Correct PPE Practices”

Objectives --

1. To determine the value of Video “Stories” for improving PPE practices
2. To determine which pesticide handlers will most likely benefit
3. To determine which types of Video “Stories” they need to hear
4. To determine how to effectively identify relevant stories.
5. To determine options to capture video footage on stories
6. To determine how to best disseminate Video “Stories”
7. To determine how to effectively quantify dissemination and impact of Video “Stories”

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Closing



Michael Alavanja
National Cancer Institute



Elaine Cullen
Prima Consulting
Services



Maryann D'Alessandro
NIOSH/NPPTL



Kim Faulkner
NIOSH/NPPTL



Xuemei Huang
Hershey Medical Center



Ron Jester
University of Delaware
Extension



Kevin Keaney
U.S. EPA



Chuck Urban
NIOSH

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NIOSH Pesticide PPE Seminar Series

Sep. 19, 2012 -- Creating a Pesticide PPE Informational
Brochure and Making it Widely Available

Nov. 14, 2012 – Selecting Respirators for Pesticide
Handling Exposures

Jan. 23, 2013 – PPE Reductions for Closed Systems

Mar. 26, 2013 – Motivating Best Personal Protective
Equipment Practices

May 15, 2013 – Dermal Route of Exposure to Pesticides

PPE = Personal Protective Equipment

This meeting is being recorded

Quality Partnerships Enhance Worker Safety & Health



Photo Courtesy of Virginia
Tech Pesticide Programs

<http://www.cdc.gov/niosh/programs/ppt/>

<http://www.cdc.gov/niosh/npptl/default.html>

KFaulkner@cdc.gov

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